



TRACKING TRAJECTORIES OF FULLY CONNECTED FLOODPLAIN LANDSCAPES

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Other Partners: Deschutes Land Trust and US Forest Service



Ecological Remote Sensing



Target Features and Metrics

Herbaceous Wetlands

Large Wood

Vegetation Details

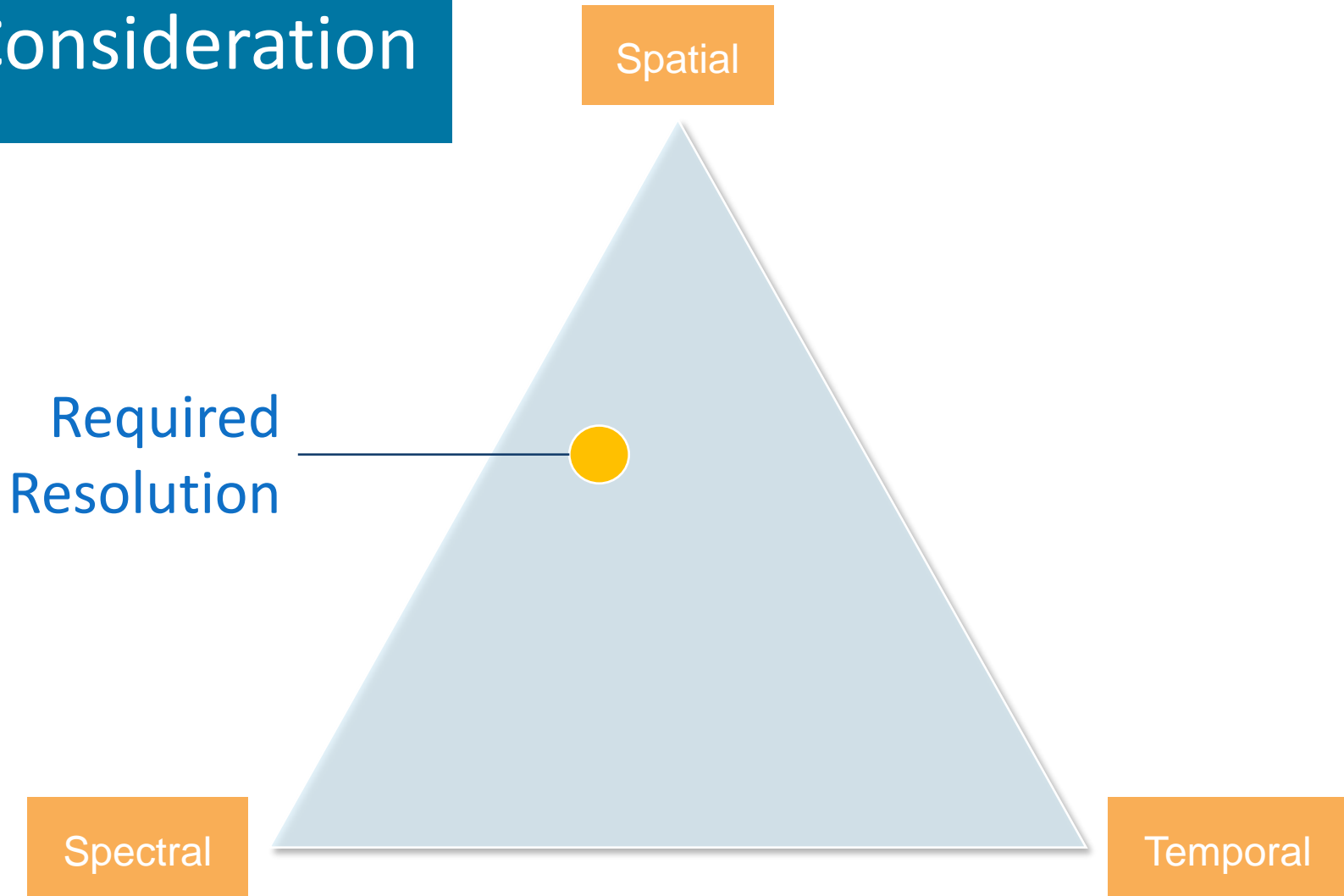
Bar Area

Vegetation Dynamics

Wetted Area & Channel Density



Consideration



Imagery Acquisition

Flight Logistics
UAS Platform
Appropriate Sensor



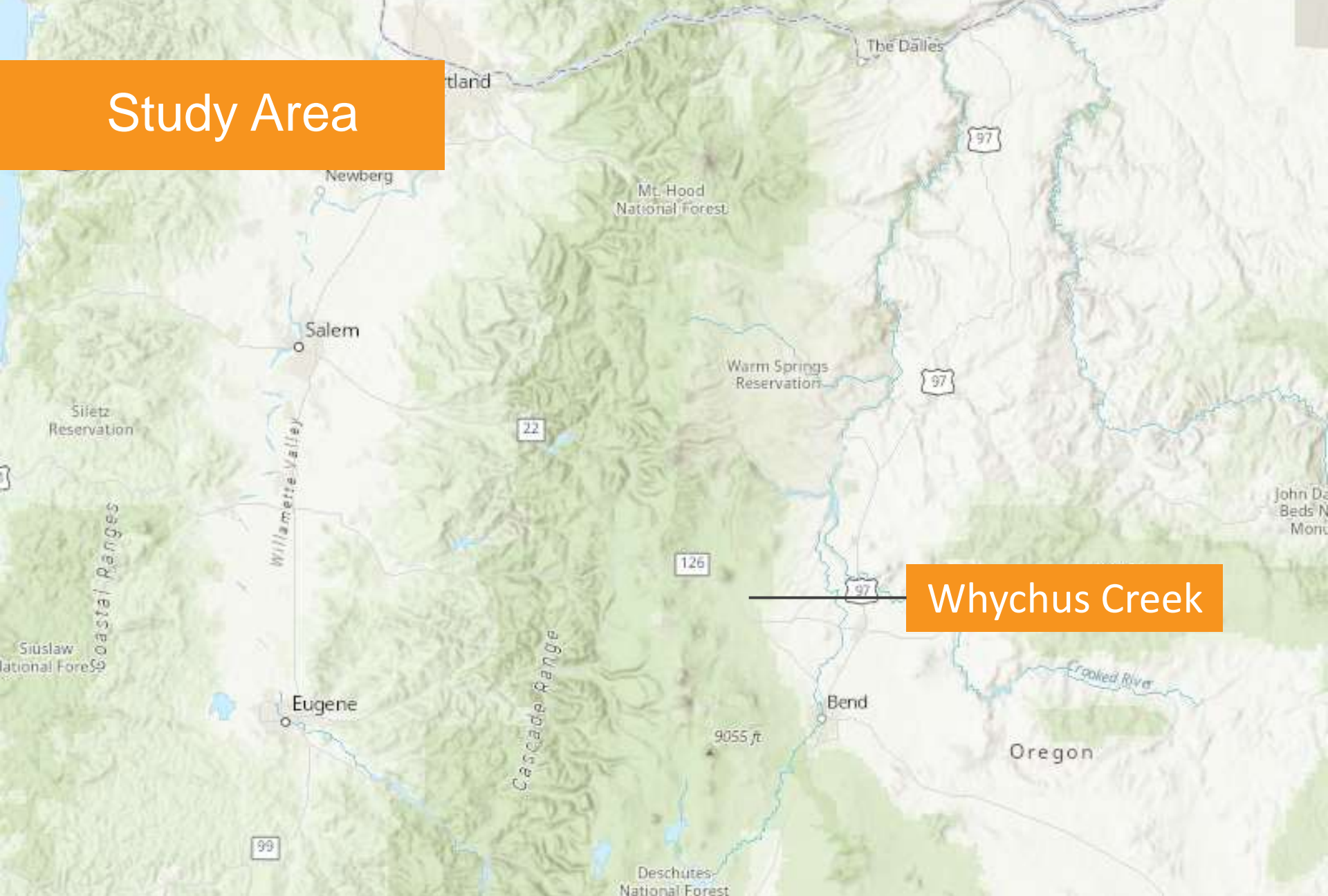


WHYCHUS CREEK MONITORING

SISTERS, OR



Study Area



Whychus Creek



Why Remote Sensing?

330 ft

Completed summer 2021
Imagery summer 2022





Completed summer 2021
Imagery summer 2022





Completed summer 2016
Imagery summer 2022





Unrestored
Reach

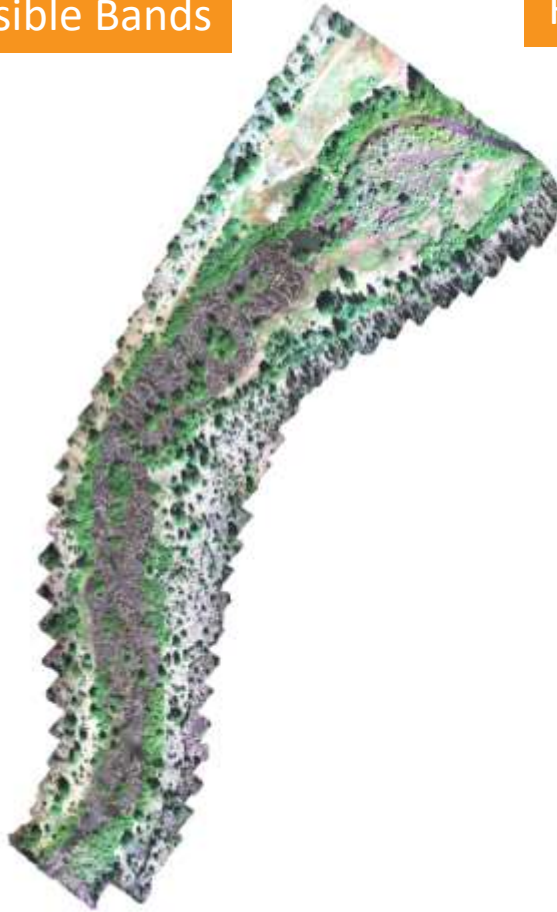
Restored
Reach

Completed summer 2016
Imagery summer 2022

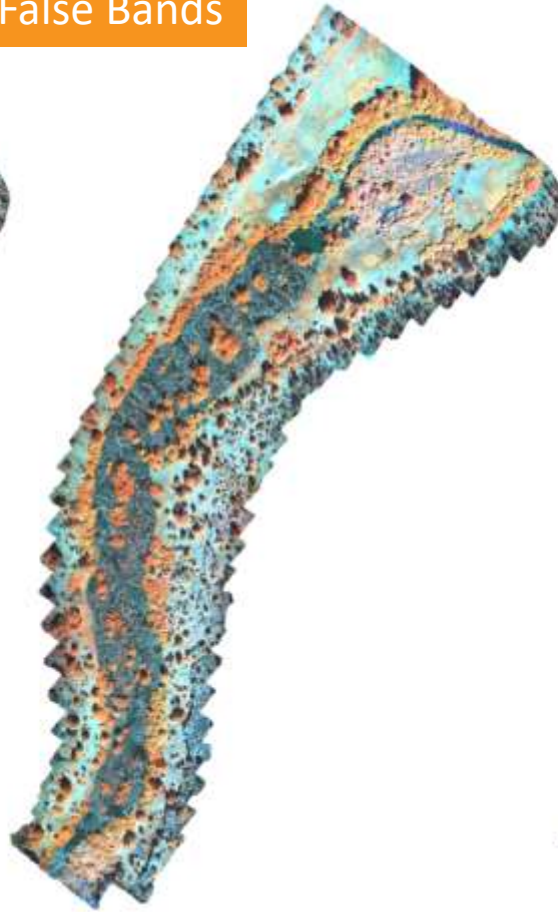


Visualization & Interpretation

Visible Bands



False Bands



NDWI

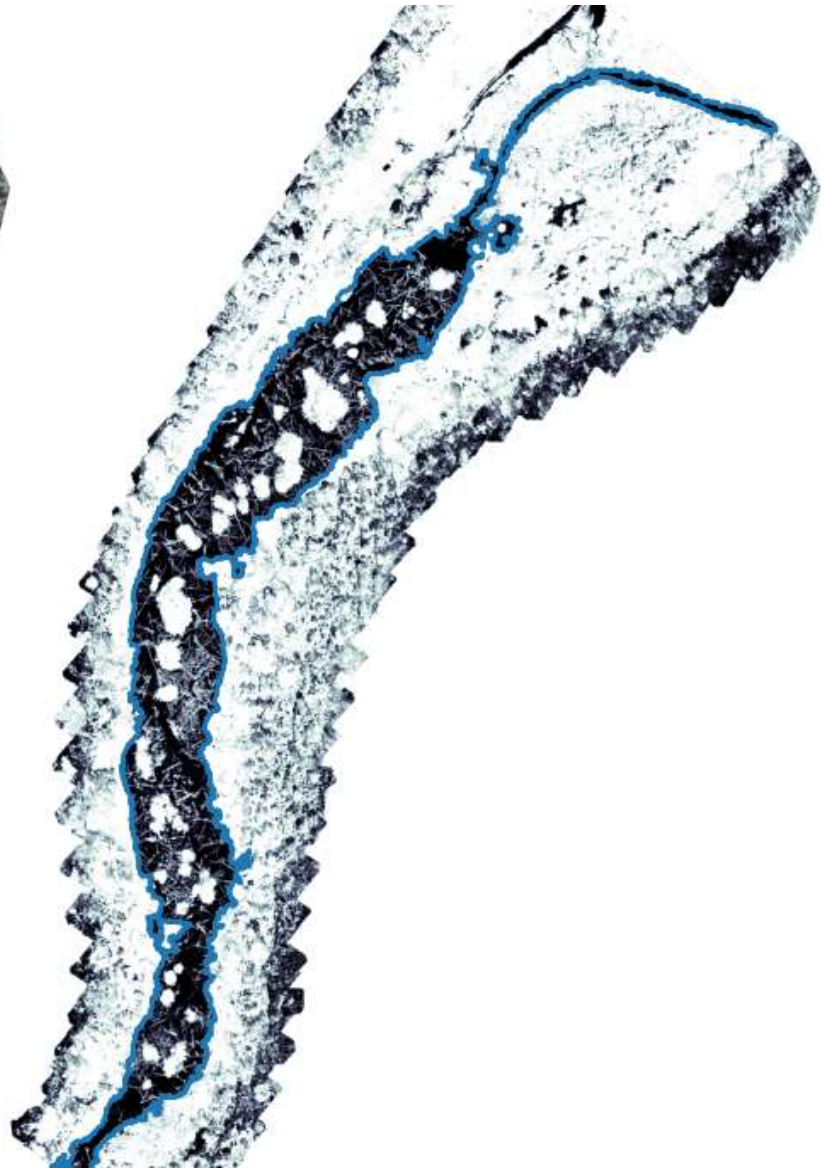
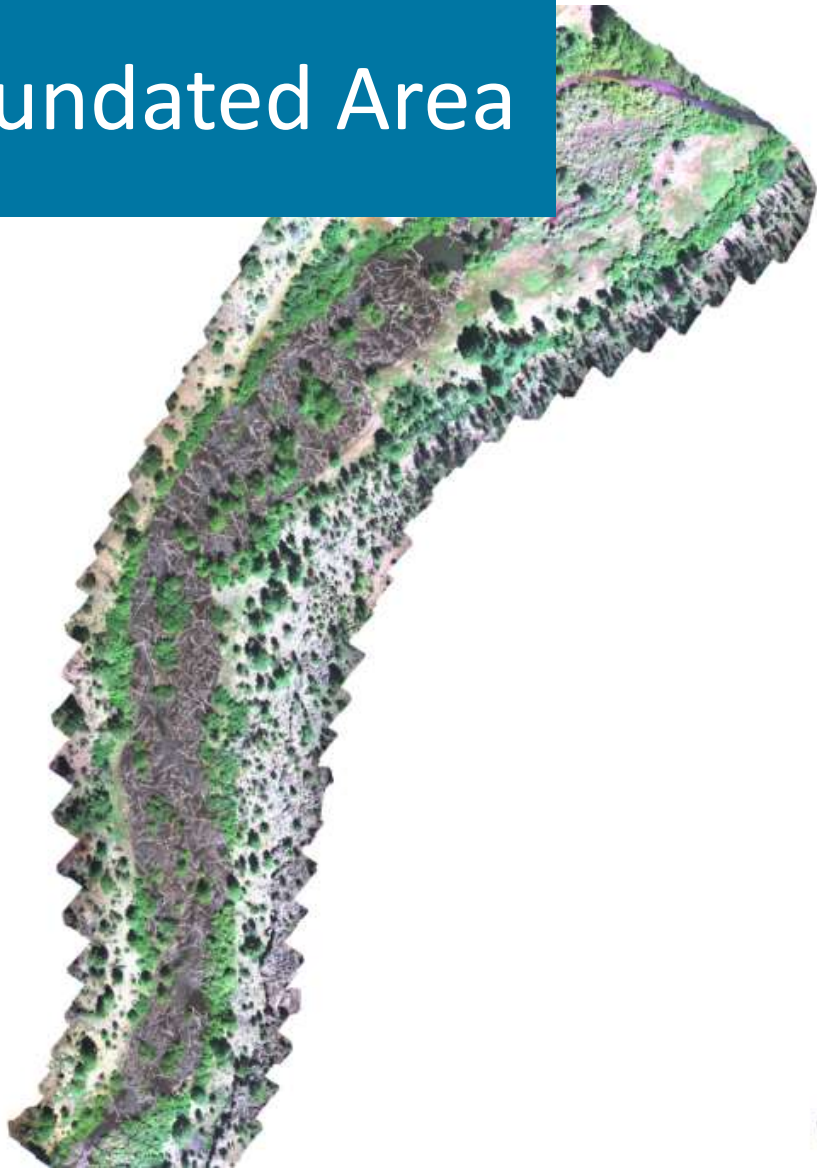




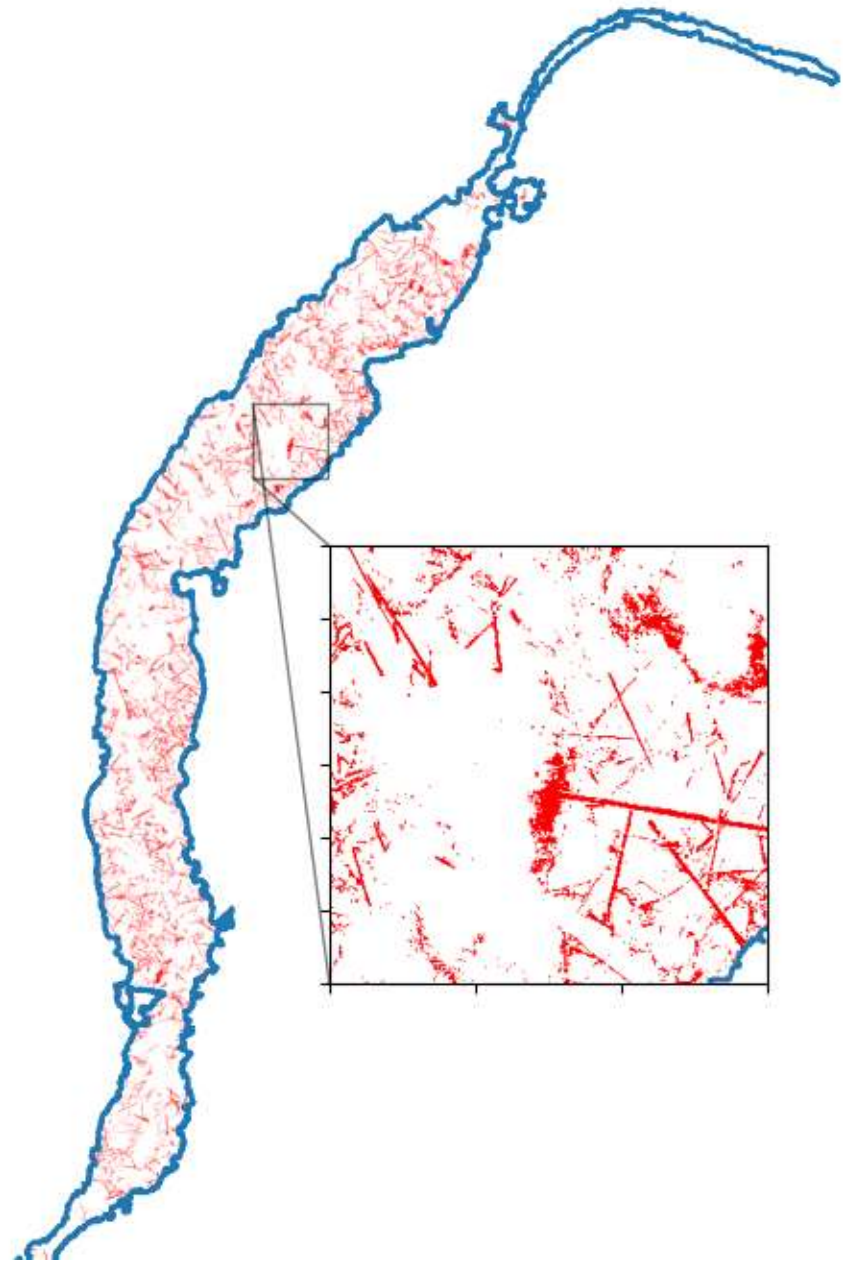
CLASSIFIED IMAGERY



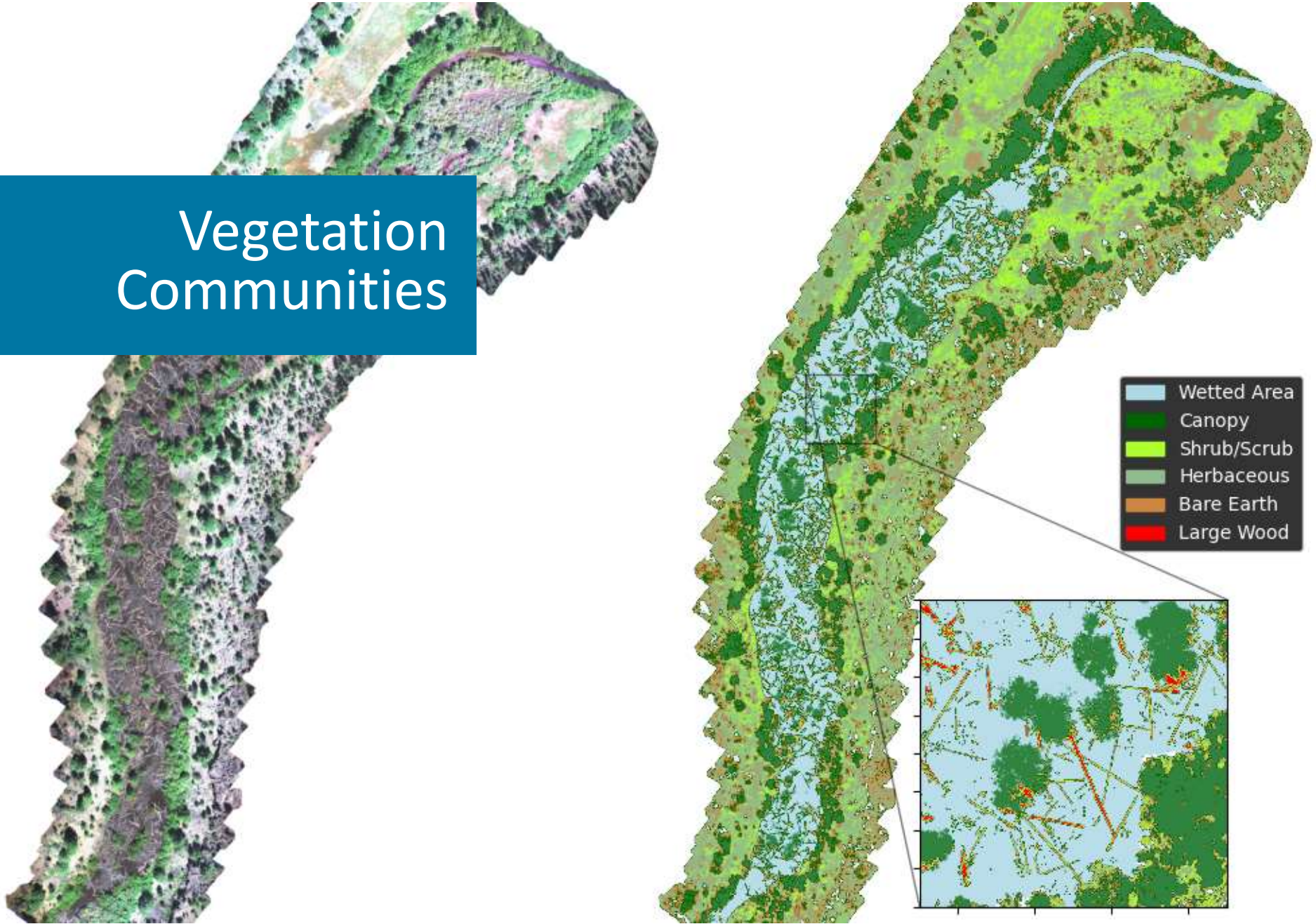
Inundated Area



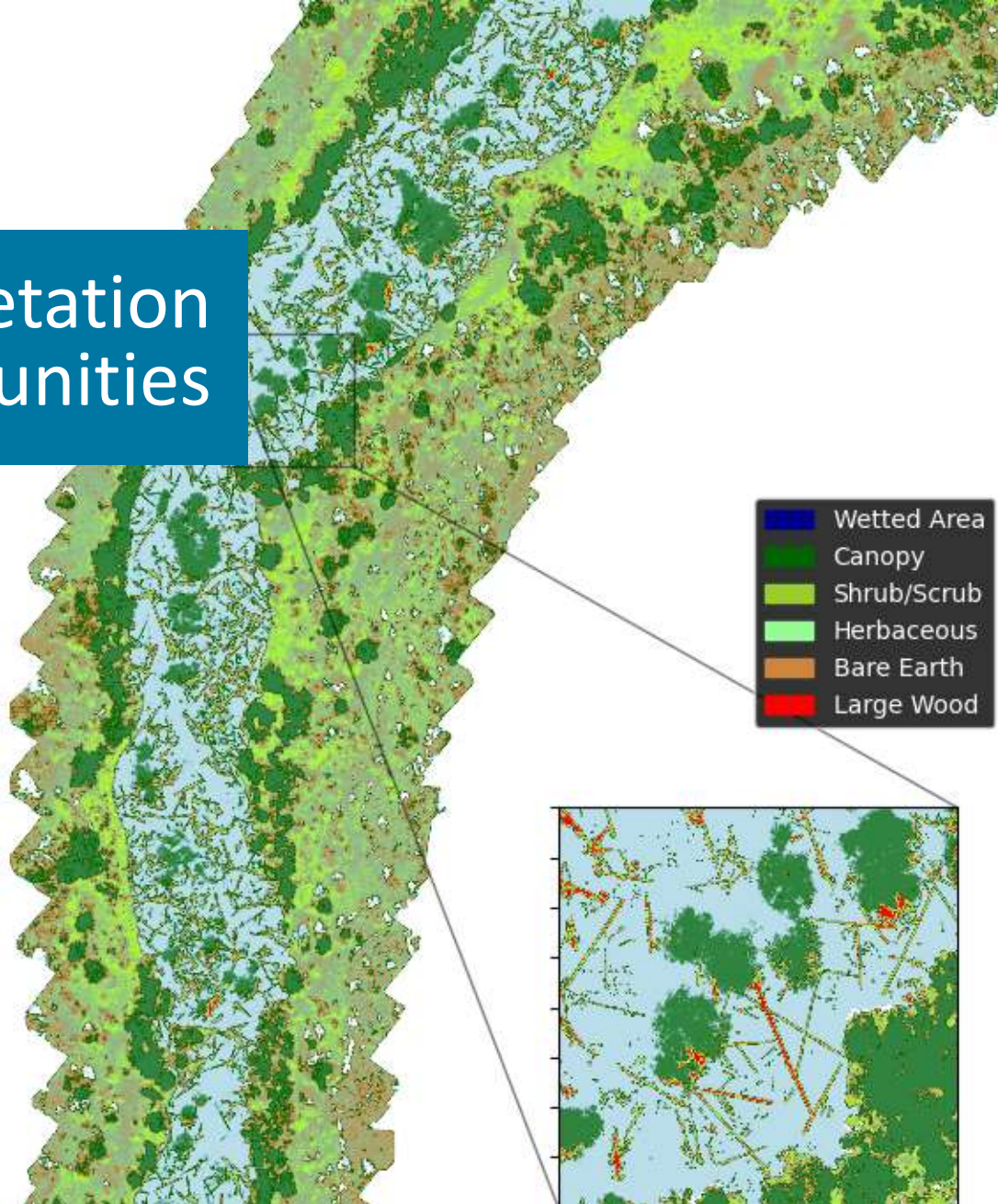
Large Wood



Vegetation Communities



Vegetation Communities



Alder Cottonwood Juniper Ponderosa pine Willow

Vegetation Species

Project completed in 2021

Upland trees are still present within the inundated area on levee islands

Upland trees are expected to die off due to the change in hydrology



Next Steps

- Repeat analysis on additional years of data
- Plot landcover, canopy, and wetted area metrics
- Incorporate elevation data
- Collect more validation data
- Refine training data

